

ENVIRONMENTAL ASSESSMENT  
AND  
REGULATORY IMPACT REVIEW  
FOR AN  
EMERGENCY RULE  
TO REDUCE SEA TURTLE BYCATCH AND BYCATCH MORTALITY IN THE  
ATLANTIC PELAGIC LONGLINE FISHERY

United States Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Highly Migratory Species Management Division

September 27, 2000

## **Emergency Rule to Reduce Sea Turtle Bycatch and Bycatch Mortality in the Atlantic Pelagic Longline Fishery**

### **Framework Adjustment to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks**

**Actions:** Implement a limited time and area closure in the Northeast Distant Statistical Sampling Area and implement gear requirements for all Federally permitted vessels using pelagic longline gear to reduce levels of sea turtle bycatch and bycatch mortality in the Atlantic pelagic longline fishery

**Type of statement:** Environmental Assessment and Regulatory Impact Review

**Lead Agency:** National Marine Fisheries Service

**For further information:** Margo Schulze-Haugen  
Highly Migratory Species Management Division  
1315 East-West Highway: F/SF1  
Silver Spring, MD 20910  
(301) 713-2347

**Abstract:** This emergency rule reduces the levels of sea turtle bycatch and bycatch mortality in the Atlantic pelagic longline fishery (which includes the Atlantic Ocean, Gulf of Mexico, and the Caribbean Sea). In developing the emergency rule, the Office of Sustainable Fisheries, National Marine Fisheries Service, examined methods of reducing the levels of both sea turtle take and mortality, including maintaining the fishery in a status quo condition, time/area management measures, gear deployment modifications to reduce interactions, prohibition of pelagic longlining by United States flagged vessels, and gear requirements to reduce bycatch mortality. The final action implements a limited time/area closure and gear requirements, which will reduce sea turtle takes and associated mortality, while continuing to allow the Atlantic pelagic longline fishery to operate, pending the conclusion of the consultation under the Endangered Species Act that was reinitiated on September 7, 2000.

## TABLE OF CONTENTS

1.0.	PURPOSE AND NEED FOR ACTION .....	1
1.1	Introduction .....	1
1.2	Reinitiation of Consultation .....	1
1.3	Change of Pelagic Longline Definition .....	2
2.0	ALTERNATIVES INCLUDING THE SELECTED ACTIONS .....	4
2.1	Measures to Reduce Bycatch of Sea Turtles .....	4
2.2	Measures to Reduce Post-Release Mortality of Sea Turtles Incidentally Captured .....	5
3.0	AFFECTED ENVIRONMENT .....	7
3.1	Sea Turtles .....	7
3.1.1	Information from the June 30, 2000 Biological Opinion for Atlantic Highly Migratory Species Fisheries .....	8
4.0	DESCRIPTION OF THE PELAGIC LONGLINE FISHERY FOR ATLANTIC HMS ..	9
5.0	ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES CONSIDERED .....	12
5.1	Measures to Reduce Bycatch of Sea Turtles .....	12
5.2	Measures to Reduce Post-Release Mortality of Sea Turtles Incidentally Captured .....	26
6.0	REGULATORY IMPACT REVIEW .....	33
6.1	Analyses of management measures to reduce bycatch of sea turtles .....	33
6.2	Analyses of measures to reduce post-release mortality of sea turtles incidentally captured .....	36
6.3	Conclusion .....	37
7.0	COMMUNITY PROFILES .....	39
8.0	FINDING OF NO SIGNIFICANT ENVIRONMENTAL IMPACT .....	42
9.0	LIST OF PREPARERS .....	43
10.0	REFERENCES .....	43
APPENDIX ONE	IDENTIFYING THE TIME/AREA CLOSURE .....	45
APPENDIX TWO	EXAMPLE OF LINE CLIPPER DESIGN .....	50

## **1.0. PURPOSE AND NEED FOR ACTION**

### **1.1 Introduction**

The Biological Opinion (BO) issued on June 30, 2000, by the Office of Protected Resources found that the continued operation of the Atlantic pelagic longline fishery is likely to jeopardize the continued existence of loggerhead and leatherback sea turtles. Under the Endangered Species Act (ESA), the Highly Migratory Species (HMS) Management Division of the Office of Sustainable Fisheries is required to implement measures to address sea turtle takes and associated mortality no later than September 30, 2000.

Since the BO was issued, NMFS has concluded that further analyses of observer data and additional population modeling of loggerhead sea turtles are needed to determine more precisely the impact of the pelagic longline fishery on turtles. NMFS reinitiated consultation to consider these factors, and anticipates issuing a new BO in early 2001. In the interim, NMFS is implementing emergency regulations, consistent with National Standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act and based on historical data on sea turtle takes and mortality, to reduce anticipated effects of the pelagic longline fishery on sea turtles. The following sections provide background on the consultation process, the June 30, 2000, BO, and measures analyzed to reduce sea turtle takes and mortality.

### **1.2 Reinitiation of Consultation**

Several actions can create the need to reinitiate consultation: the regulated action exceeds the incidental take statement, a change in action that was not previously considered, or a change in the population status of a listed species. NMFS' Office of Sustainable Fisheries requested reinitiation of consultation on HMS fisheries on November 19, 1999, based on preliminary information that the number of loggerhead sea turtles incidentally taken in the pelagic longline fishery had exceeded levels anticipated in the April 23, 1999, BO. The bycatch reduction rule (proposed December 15, 1999; final August 1, 2000), which constituted a major action that may have impacted the operation of the pelagic longline fishery in a manner not considered in the April 23, 1999, BO, also triggered the need to reinitiate consultation.

In 1999, preliminary information indicated that the pelagic longline component of the HMS fisheries for swordfish and tuna exceeded the number of loggerhead and leatherback sea turtles that were expected to be taken in the fishery. Specifically, the incidental take statement anticipated the following levels of capture:

- (a) 690 leatherback sea turtles (*Dermochelys coriacea*), entangled or hooked (annual estimated number) of which no more than 11 are observed hooked by ingestion or moribund when released.
- (b) 1541 loggerhead sea turtles (*Caretta caretta*) entangled or hooked (annual estimated number); of which no more than 23 may be hooked by ingestion or observed moribund when released.

Preliminary analyses of partial observer records from 1999 indicate that up to 50 loggerheads and 19 leatherbacks were observed “hooked by ingestion” or moribund upon release, which exceeds the anticipated levels for this criteria (i.e., observed hooked by ingestion or observed moribund upon release) and indicated a need to re-evaluate take levels and measures to reduce these levels. At the time the June 30, 2000, BO was issued, extrapolated data for 1999 were not yet available, so it was not possible to determine whether or not total anticipated take levels were exceeded.

The June 30, 2000, BO is based on information provided in the Final Supplemental Environmental Impact Statement (FSEIS) on the Regulatory Amendment to the Atlantic Tunas, Swordfish, and Sharks Fishery Management Plan (HMS FMP), the draft Technical Memorandum: “Using Time and Area Closures to Minimize Incidental Catch and Bycatch in U.S. Atlantic Pelagic Longline Fisheries,” bycatch data analyses conducted by the NMFS Southeast Fisheries Science Center, preliminary lists of alternatives, telephone conversations with NMFS' Office of Sustainable Fisheries, HMS staff, and other sources of information.

Upon evaluating the current status of the loggerhead and leatherback sea turtles, the June 30, 2000, BO concluded that the current actions of the pelagic longline fishery jeopardize the continued existence of these species. This conclusion was based on the current status of the loggerhead and leatherback sea turtle populations in the Atlantic Ocean, Caribbean, and Gulf of Mexico, the status of the northern subpopulation of loggerhead sea turtles, and the anticipated continuation of current levels of injury and mortality of both species described in the environmental baseline and cumulative effects section of the BO. The future trend of species abundance considers the current rate of bycatch in HMS fisheries as well as potential shifts in effort estimated in the FSEIS.

Since the BO was issued, NMFS has concluded that further analyses of observer data and additional population modeling of loggerhead sea turtles are needed to determine more precisely the impact of the pelagic longline fishery on sea turtles. Because of this, NMFS reinitiated consultation on the HMS fisheries on September 7, 2000. The agency anticipates issuing a new BO in early 2001. In the interim, NMFS is implementing emergency regulations, based on historical data on sea turtle interactions, to reduce the short-term effects of the pelagic longline fishery on sea turtles.

### **1.3 Change of Pelagic Longline Definition**

On August 1, 2000, NMFS published a final rule (FR 65 47214) to prohibit pelagic longline fishing at certain times and in certain areas within the Exclusive Economic Zone (EEZ) of the Atlantic Ocean off the coast of the Southeastern United States and in the Gulf of Mexico. This action was deemed necessary to reduce bycatch and incidental catch of overfished and protected species by pelagic longline fisheries that target HMS. The final rule requires that permitted vessels with pelagic longline gear on board operate a vessel monitoring system (VMS) whenever the vessel leaves port and prohibits such a vessel from fishing with any gear within the closed area.

The regulatory text implementing the final rule defined pelagic longline gear in a specific manner so as to avoid applying the VMS requirement and fishing restrictions to vessels fishing bottom longline gear. Bottom longline gear used to target sharks, tilefish, snappers and/or groupers does not have the same bycatch concerns as pelagic longline gear and was therefore beyond the scope of the time/area closures. The final regulations define pelagic longline gear as consisting of five components: a power-operated longline hauler, a mainline, high-flyers, floats capable of supporting the length of the mainline, and leaders (gangions) with hooks. The regulations further state that removal of any one of these components from a vessel constitutes removal of pelagic longline gear. Vessel operators removing one or all of the listed components would be eligible to fish with other gear in the closed areas and would not be required to operate a VMS while at sea.

Subsequent to the August 1, 2000, publication of the final rule, inquiries have been received by NMFS regarding a potential loop-hole in the regulations relative to removal of high-flyers from a vessel. Fishing vessels could potentially utilize the remaining components of pelagic longline gear in the areas of the U.S. EEZ closed by the final rule to continue to target HMS, thereby undermining the objective of bycatch reduction and reducing the benefits of the closures. This potential loop-hole is particularly problematic for the closed area off the east coast of Florida where vessels can operate relatively close to shore and employ means other than high-flyers to facilitate location and retrieval of the fishing gear. Removal of the term “high-flyer” from the list of components constituting pelagic longline gear will avoid this potential loop-hole and will enhance the enforcement of the time/area closures. Removing high-flyers from the definition of pelagic longline gear will have no measurable impact on the environment since the intention of the final rule was to prohibit all pelagic longline fishing in the closed areas by vessels with HMS fishing permits. The environmental, economic and social impacts associated with the time/area closures were previously considered and are discussed in detail in the FSEIS issued with the August 1, 2000 final rule.

## **2.0 ALTERNATIVES INCLUDING THE SELECTED ACTIONS**

### **2.1 Measures to Reduce Bycatch of Sea Turtles**

**Final Action: Closure of a 2°x2° area and a 2°x6° area (“L-shape”) in Northeast Distant Statistical Sampling (NED) area to pelagic longlining for the duration of the emergency rule<sup>1</sup> beginning October 8, 2000**

This action will close an “L-shape” area, consisting of a 2°x2° area (41°N. lat. to 43°N. lat and 47°W. long. to 49°W. long.) and a 2°x6° area (43°N. lat. to 45°N. lat and 43°W. long. to 49°W. long.), within the NED area for the duration of the emergency rule beginning October 8, 2000, to pelagic longline fishing.

**Not Selected at this Time: Closure of NED area to pelagic longlining from October to December**

This alternative would close the NED area to pelagic longline fishing from October through December.

**Not Selected at this Time: Prohibit the setting of a pelagic longline north of 35° N. lat. in water temperatures warmer than 64 degrees F and to times no earlier than 10 p.m.**

This alternative would restrict all pelagic longline vessels fishing north of 35° N. lat. to fishing in waters with sea surface temperatures cooler than 64 degrees F, and would restrict setting gear to no earlier than 10:00 p.m. The gear would have to be hauled by 1:00 p.m. the following day.

**Not Selected at this Time: Prohibit the setting of a pelagic longline in water temperatures greater than 68 degrees F in the NED area**

This alternative would restrict setting of pelagic longlines in the NED area to water temperatures 68 degrees F or cooler, but would not restrict the times of sets.

**Not Selected at this Time: Prohibit the setting of pelagic longline gear between 3 p.m. and 9 p.m.**

This alternative would restrict the times, but would not restrict the temperatures, that pelagic longlines could be set.

---

<sup>1</sup>Emergency rules are effective for 180 days from the date of publication in the Federal Register. Emergency rules may be extended for an additional 180 days if notice and comment are provided.

**Not selected at this Time: Measures to rig longlines so hooks are fished deeper in the water column**

This alternative would prohibit gangions or hooks within 240 feet of the float or floatline (240 feet is believed to be the mean depth for hooking swordfish).

**Not selected at this Time: Status Quo**

This alternative would maintain the existing regulations for the pelagic longline fishery in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea.

**Not selected at this Time: Prohibit use of pelagic longline gear by U.S.-flagged fishing vessels in the Atlantic Ocean, including the Gulf of Mexico and Caribbean Sea**

This alternative would prohibit the use of pelagic longline gear in Atlantic HMS fisheries year-round.

## **2.2 Measures to Reduce Post-Release Mortality of Sea Turtles Incidentally Captured**

**Final Action: Require line clippers to be used and carried on board pelagic longline vessels**

All Federally permitted vessels engaged in pelagic longline fishing will be required to have a line clipper on board that meets NMFS design and performance standards and use it to remove gear from incidentally captured turtles. The line clipper will be able to remove gear from turtles in the water as well as from turtles brought on board the vessel.

**Final Action: Require dipnets to be used and carried on board pelagic longline vessels**

All Federally permitted vessels engaged in pelagic longline fishing will be required to have a dipnet on board that meets NMFS design and performance standards and use it to facilitate removal of gear from incidentally captured turtles. The dipnet will allow for smaller-sized turtles to be brought on board the fishing vessel to allow for more complete disentanglement and dehooking.

**Not Selected At This Time: Require a dehooking device to be used and carried on board pelagic longline vessels**

All Federally permitted vessels engaged in pelagic longline fishing for HMS would be required to have a dehooking device on board and use it to remove gear from incidentally captured turtles.

**Not selected at this Time: Status quo**

This alternative would maintain the existing regulations regarding sea turtle handling and release for the pelagic longline fishery in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea

**Not Selected at this Time: Require use of corrodible hooks on all pelagic longline gear**

All Federally permitted vessels engaged in pelagic longline fishing for HMS would be required to use corrodible hooks only.

**Not Selected at this Time: Require use of circle hooks on all pelagic longline gear**

All Federally permitted vessels engaged in pelagic longline fishing for HMS would be required to use circle hooks only.

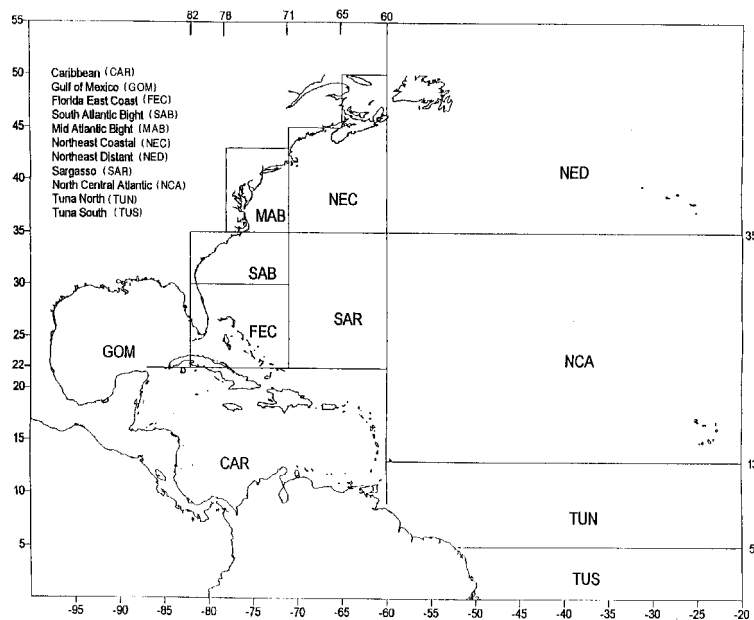
### 3.0 AFFECTED ENVIRONMENT

Pelagic longline fishermen encounter many species of fish; some of those captured are marketable and thus are retained, others are discarded for economic or regulatory reasons. Species frequently encountered are swordfish, tunas, and sharks, as well as billfish, dolphin, wahoo, king mackerel, and other finfish species. Sometimes pelagic longline fishermen also catch sea turtles, marine mammals, and sea birds, known collectively as “protected” species. All of these species are Federally managed, and NMFS seeks to control the mortality that results from fishing effort. Detailed descriptions of the life histories and population status of those species are given in the HMS FMP and are not repeated here. Management of declining fish populations requires reductions in fishing mortality from both directed and incidental fishing. The status of Atlantic swordfish, Atlantic billfish, Atlantic tunas, large coastal and pelagic sharks, other finfish, marine mammals, and seabirds is summarized in chapter 5 of the FSEIS, and is not repeated here.

#### 3.1 Sea Turtles

Loggerhead and leatherback sea turtles are the species predominantly caught in the Atlantic pelagic longline fishery. Turtles are caught throughout the range of the fishery (Gulf of Mexico, Caribbean, Florida to Maine, and outside the U.S. EEZ), but the sets with the most turtles

**Figure 3.1** Geographic areas used in summaries of pelagic logbook data from 1992 - 1998. Source: Cramer and Adams, 2000.



incidentally captured occur in the NED area (see Figure 3.1) in the third and fourth quarter. Many sea turtle populations are slow to recover from increased fishing mortality because their reproductive potential is low (late sexual maturation, low juvenile survival). General information about the biology and status of sea turtles can be found in the Recovery Plans for each species (available through the Office of Protected Resources, NMFS); the status of sea turtle populations is provided in Table 3.1. A high percentage of sea turtles are released alive from pelagic longline entanglements. However, NMFS is concerned about serious injuries and post-release mortality.

Table 3.1 Status of Atlantic sea turtle populations: Species taken in the pelagic longline fishery 1992-1997. Source: NMFS, 1999a.

Species/Stock	Status: trend in U.S. nesting population
Loggerhead: Northern Sub-population	Threatened: declining through mid-1980s, no trend detected since that time
Leatherback	Endangered: loss of some nesting populations, otherwise stable
Green	Endangered: increasing
Kemp's Ridley	Endangered: thought to be increasing
Hawksbill	Endangered: unknown if there is a recent trend

### 3.1.1 Information from the June 30, 2000 Biological Opinion for Atlantic Highly Migratory Species Fisheries

The following information is taken directly from the June 30, 2000, BO and is included here for background information only. Please refer to the BO for a complete discussion of sea turtle interactions with the Atlantic pelagic longline fishery.

Sea turtle bycatch estimates from observations of takes in the pelagic longline component of the swordfish/tuna/shark fishery number in the thousands. The incidental take estimates anticipated in Scott and Brown (1997), used in the last Biological Opinion, were revised and updated by estimates provided in Johnson *et al.* (1999) and Yeung (1999). The estimated numbers for all species of sea turtles are provided in Table 3.2 below. These estimates are little changed from those used in developing the previous (April 23, 1999) biological opinion, and are provided as background in understanding the magnitude of take NMFS believed to be occurring in the fishery.

Table 3.2 Estimated Sea Turtle Takes Recorded in the U.S. Atlantic and Gulf of Mexico Pelagic Longline Fishery for Swordfish, Tuna and Sharks, 1992 - 1998 (based on estimates in Johnson <i>et al.</i> , 1999 and Yeung, 1999b, summed from estimates stratified by species and area).											
Species	Loggerhead		Leatherback		Green		Hawksbill		Kemp's		Sum Total**
Year	Total	Dead*	Total	Dead*	Total	Dead*	Total	Dead*	Total	Dead*	
1992	247	18	871	87	129	18	30	0	0	0	1295
1993	374	9	889	12	25	0	0	0	0	0	1315
1994	1279	12	700	12	24	0	0	0	15	0	2047
1995	2169	0	925	0	31	0	0	0	0	0	3290
1996	410	0	674	0	0	0	0	0	0	0	1084
1997	329	0	357	0	0	0	13	0	23	0	765
1998	472	0	169	0	0	0	77	0	0	0	718
* Does not account for death that may occur after release, which several studies have shown to be 29-33%											
**Totals include unidentified turtles not listed in the table.											

Preliminary information from observer data for 1999 indicates that 45 leatherbacks, 64 loggerheads and 3 unidentified turtles were observed taken; 1 of the loggerheads was dead when boated (NMFS unpublished data). The location of the hook was not always recorded (N=60) and thus it is assumed that all animals for which this information was not recorded were seriously injured. Thus, 19 of 45 (42%) leatherbacks, 50 of 64 (78%) loggerheads and 1 of 3 (33%) unidentified turtles were assumed to have ingested the hook and

were seriously injured or dead. In addition, many animals were released with line still attached, which may also contribute to subsequent mortality.

As noted above, at 3% observer coverage, take levels documented in 1999 indicate that up to 50 loggerheads and 19 leatherbacks were observed “hooked by ingestion” or moribund upon release. and up to 83 loggerheads and 32 leatherbacks would have been observed “hooked by ingestion” or moribund at a 5% level of coverage. The lower figures were calculated based on an assumption of 5% observer data. However, only about a 3% coverage level was obtained (G. Scott, pers. comm.), so the observed levels of take would have been considerably higher, had the required 5% coverage level been achieved (as represented by the higher numbers).

As previously stated, the incidental take statement anticipated the following levels of take:

- (a) 690 leatherback sea turtles (*Dermochelys coriacea*), entangled or hooked (annual estimated number) of which no more than 11 are observed hooked by ingestion or moribund when released.
- (b) 1541 loggerhead sea turtles (*Caretta caretta*) entangled or hooked (annual estimated number); of which no more than 23 may be hooked by ingestion or observed moribund when released.

Witzell (1999) summarized turtle catch from logbook data (1992 - 1995) for sets targeting swordfish and tuna, or both. The Northeast Distant Area accounted for 70% of the loggerhead and 47% of the leatherback captures that were reported north of the mid-Atlantic Bight. June through November were the peak months for reported captures. A review of observer reports for sets targeting all species between 1990 - 1996, yielded similar results (Hoey, 1998). The Northeast Distant accounted for 75% of the loggerhead and 40% of the leatherback captures for all sampling areas. The Northeast Distant Area also was the only area where interactions of four or more turtles occurred on a single set. July through November were the predominant months for turtle captures (Hoey 1998).

As noted above, since the BO was issued, NMFS has concluded that further analyses of observer data and additional population modeling of loggerhead sea turtles are needed to determine more precisely the impact of the pelagic longline fishery on sea turtles. These analyses will include potential gear measures for reducing sea turtle takes, time/area closure analyses, and modeling to assess the impacts of fisheries on populations and subpopulations of sea turtles and the appropriate level of mortality. A reevaluation of the observer records for hooking location and level of serious injury may also be conducted. Because of this, NMFS reinitiated consultation on the HMS fisheries on September 7, 2000. The agency anticipates issuing a new BO in early 2001. In the interim, NMFS is implementing emergency regulations, based on historical data on sea turtle interaction, to reduce anticipated effects of the pelagic longline fishery on sea turtles.

#### **4.0 DESCRIPTION OF THE PELAGIC LONGLINE FISHERY FOR ATLANTIC HMS**

The U.S. pelagic longline fishery for Atlantic HMS primarily targets swordfish, yellowfin tuna, or bigeye tuna in various areas and seasons. Although this gear can be modified (i.e., depth of set, hook type, etc.) to target either swordfish or tuna, like other hook and line fisheries, it is a multi-species fishery. Longline gear sometimes attracts and hooks non-target finfish with no commercial value, as well as species that cannot be retained by commercial fishermen, such as billfish. Pelagic longlines may also interact with protected species such as marine mammals, sea turtles and sea birds.

Pelagic longline gear is composed of several parts. The primary fishing line, or mainline of the longline system, can vary from five to 40 miles in length, with approximately 20 to 30 hooks per mile. The depth of the mainline is determined by ocean currents and the length of the floatline, which connects the mainline to several buoys and periodic markers with radar reflectors and radio beacons. Each individual hook is connected by a leader to the mainline. Lightsticks, which contain chemicals that emit a glowing light, are often used. When attached to the hook and suspended at a certain depth, they attract bait fish which may, in turn, attract pelagic predators. When targeting swordfish, the lines generally are deployed at sunset and hauled in at sunrise to take advantage of the nocturnal near-surface feeding habits of the large pelagic species (Berkeley *et al.*, 1981). In general, longlines targeting tuna are set in the morning, deeper in the water column, and hauled in the evening. Except for vessels of the distant water fleet which undertake extended trips, fishing vessels preferentially target swordfish during periods when the moon is full to take advantage of increased densities of pelagic species near the surface.

Reported effort, in terms of number of vessels fishing, has fluctuated in recent years but has not shown obvious trends in the distant water, southeast coastal, and northeast coastal areas. Although swordfish appear to have remained the primary target species in the Caribbean, distant water, and southeast coastal fishery areas, the proportion of swordfish in the reported landed catch has decreased in both the distant water and southeast coastal areas. In the case of the distant water fishery, an increasing proportion of the reported landings are BAYS tuna. The pelagic longline fishery sector is comprised of five relatively distinct segments with different fishing practices and strategies.

The emergency rule focuses on the NED area which spans the northwest Atlantic to as far east as the Azores and the mid-Atlantic Ridge. Many of the current distant water operations were among the early participants in the U.S. directed Atlantic commercial swordfish fishery. These larger vessels, with greater ranges and capacities than the coastal fishing vessels, enabled the United States to become a significant player in the north Atlantic fishery. They also fish for swordfish in the south Atlantic. The New England longline vessels traditionally have been larger than their Florida counterparts because of the distances required to travel to the fishing grounds. The larger sized vessels allow more time at sea. A typical New England longline vessel generally ranges from 60 to 80 feet in length, and fishes off New England in the summer and fall. As winter approaches, these vessels work their way southward. Fishing trips in this fishery tend to be longer than in other fisheries, averaging 30 days and 16 sets. There have been approximately ten to fifteen distant water vessels in recent years, reduced from a peak of 60 to 70 vessels in the late 1980s and early 1990s.

Swordfish semi-annual commercial quotas are monitored through a combination of vessel logbooks, tally sheets, port sampling, dealer reports, and scientific observer coverage. Logbooks contain information on fishing vessel activity, including dates of trips, number of sets, area fished, and the number of marine species caught, released, and retained. In some cases, social and economic data such as volume and cost of fishing inputs are also provided. Daily logbooks must be completed within 48 hours of a trip and postmarked within seven days of sale of the swordfish and/or tuna off-loaded from a trip. Copies of tally sheets must be submitted with the logbook forms.

Please refer to section 2.5.1 of the HMS FMP and section 6.0 of the FSEIS for a more detailed description and explanation of the Atlantic pelagic longline fishery. Note that the definition of pelagic longline gear has been modified by removing the high-flyer criterion.